ABSTRACT OF THE DISCLOSURE

A method and apparatus for removing one or more minute particle(s) from a surface of a sample using laser technology is provided. The laser energy wavelength, the pulse length and shape of the laser energy, the laser energy density, the pulse repetition rate of the laser energy, the laser beam size and/or shape, the irradiation geometry, the ambient conditions, the amount and disposition of the energy transfer medium, and/or the composition of the energy transfer medium are selected and controlled, based on application and environment considerations, to precisely control the energy deposition into the particle(s), sample, and/or the energy transfer medium combination.